North American Drought Monitor – April 2004

Canada: In British Columbia, due to warmer than usual spring weather, snow melt is advanced by two to four weeks depending on the region. Streams and rivers throughout most of B.C. have been running at slightly higher levels than usually seen at this time of the year. While other areas have low snowpacks and may see drought conditions this summer, areas of possible concern which stand out are listed below: Okanogan/Kettle, Similkameen, Nicola Lake Basin, East Kootenays, Upper Bulkley/Nechako Plateau/Chilcotin/Bridge River, Liard and southern Vancouver Island. Much of the province has a moderate fire risk at this time.

The mountain snowpack, plains area soil moisture conditions, and forage growth potential are below average over much of Alberta and Saskatchewan. On farm water supplies levels are below average and some shortages are anticipated this season over much of the two provinces, both of which are expected to be further stressed due to high numbers of livestock. In Manitoba, moisture conditions are much improved in all areas except the northwest agricultural region. Warm temperatures are now needed to encourage pasture and crop growth. Forage supplies are short due to the drought conditions last year and the larger than normal cattle inventory.

A small area surrounding Lake of the Woods in northwest Ontario continues to be in a moderate to abnormally dry condition, however, most of the province is without drought concerns. Quebec and Atlantic Canada have also had adequate precipitation and there are no drought concerns as of May 1.

United States: Heavy precipitation in April, falling mostly with a storm that struck early in the month, eased drought conditions in New Mexico, Colorado, and west Texas. Drought intensity improved by one to two categories in New Mexico and one category in southeastern Colorado and extreme west Texas. By the end of April, New Mexico's D2 to D4 drought had improved to D0 to D3. Monthly precipitation totaled more than twice normal this month across the Southwest, and even exceeded 400% of normal in much of New Mexico, where the drought improvement was greatest. In contrast, rainfall less than 50% of normal this month caused expansion of D0 and D1 across southern California and D2 and D3 in western and central South Dakota and eastern Wyoming. Warm, mostly dry weather across much of California and the Northwest this month accelerated the loss of mountain snow pack, increasing the threat of an active wildfire season and lowering stream flows. Rain and snow aided drought-stressed winter wheat in the central High Plains, while dry conditions in the northern Plains affected pastures, winter grains, and emerging spring wheat. Below-normal precipitation across much of the Midwest resulted in development of D0 to D1 in northern Indiana, southern Michigan, and northwestern Ohio, as well as D0 in southern Iowa and western Illinois. D1 drought developed in the Southeast, but heavy rains during the last few days of the month brought substantial relief to some areas, especially in Alabama.

Mexico: The unusually wet conditions of March continued into April through large sections of Northern Mexico. In fact, the National Meteorological Service of Mexico

reported that the aerial average mean precipitation for March and April was the second highest on record with the total rainfall in 2004 being surpassed only by 1968 (records 1941 to present). The aerial average mean precipitation anomaly for April was 182% of normal for the entire country. The greatest concentration of wetness was observed over the states of Sonora, Chihuahua, Coahuila, Nuevo Leon and Tamaulipas were rainfall totals exceeded 500 to 1000% of normal. Less heavy rainfall was observed in portions of Baja California, Veracruz, Oaxaca and Tabasco. The heavy precipitation across northern Mexico was associated with a split flow pattern across Mexico with anomalous advection of moisture from the tropical Pacific into the continent.

The wet conditions observed during the last two months in northern Mexico favored a noticeable reduction of severe drought conditions (from D4 and D3 to D1) along the border region of Chihuahua and Sonora. Extreme drought conditions only remain in a small area close to the US border, and a small pocket of D0 still remains over northern Sinaloa. The only region with a notable increase in dryness is across the northern tip of Baja California Peninsula, where the greatest precipitation occurs during the wintertime, and thus, habitants of this region need to be cautious of water supplies as they enter the summer dry season that typically lasts 4-7 months. May rainfall shows a marked increase from northeast Mexico south into eastern and southeastern Mexico. A normal onset of these rains would prevent the development or expansion of dry conditions in eastern Mexico. Through large sections of western and southwest Mexico, the median rainfall for May is very close to zero and thus, drought indices in these areas should not show much change unless an unseasonable rainfall event were to occur. This is the first time since 1997 that Mexico is approaching the start of the summer monsoon with near normal drought indices for large sections of the country.